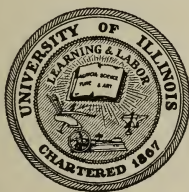


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ITINERARY  
ANNUAL INSPECTION TRIP  
of the  
College of Engineering  
UNIVERSITY OF ILLINOIS



THE LIBRARY OF THE

JAN 1963

UNIVERSITY OF ILLINOIS

Urbana

November, 1916

## **GENERAL DIRECTIONS**

### **Be Prompt**

All members of the party are required to report promptly at the appointed time and place. Instructors will call the roll at each place visited and any student absent from roll call will not be permitted to join the party until the time for the next event on the itinerary. Reported absence from roll call is sufficient justification for the dismissal of a student from the party, and for reporting him to the proper authorities at the University.

Hotel arrangements for the party will be made in advance. Upon the written request of his parents or guardian, a student may be permitted to make other arrangements for lodging, when such request seems reasonable to the instructor in charge.

### **Be Courteous**

Permission to visit the several places listed in the itinerary is a courtesy extended to the University which involves some expense and trouble to the management of these companies. Members of the party should be appreciative of this fact and they should conduct themselves properly as representatives of the University. It is particularly desirable that everyone refrain from smoking within the confines of the plants visited and that they observe fully posted regulations.

Any student who fails to conduct himself properly during an inspection trip will be reported to the University Committee on Discipline.

Since the University can have no proper control over others than those in regular attendance during these trips, friends of students will not be allowed to accompany the party except by permission, previously obtained from the instructor in charge. This privilege will be extended only in rare instances and when the reasons for the request seem fully sufficient.

### **Be Careful**

While members of the faculty who are in immediate charge of these trips will make every effort to provide for the

## GENERAL DIRECTIONS

comfort and safety of the students in the party, there is of course some slight element of personal danger on railway trains, street cars, and in plants visited. Neither the owners of plants visited, the University nor members of the faculty can assume any responsibility for accidents which may occur to students during the trip. Proper care and deportment at all times will greatly reduce the possibility of accidents.

### Be Observing

Inspection trips are required because it is believed that the educational advantages resulting from an inspection of large industrial enterprises fully justifies the time and expense involved. To realize this ideal, however, students must use every endeavor to secure a correct impression of the places visited, an appreciation of the general nature of the plant inspected and of its product, rather than of minor details.

Each student will be required to submit an acceptable report of the trip to the Head of his department, or to pass an examination to determine the extent and accuracy of the information secured on or before December 11, 1916.

### Railroad and Hotel Service

Students may leave Champaign for Chicago at 4:30 A. M., Monday, November 27; or on any regular train on Saturday or Sunday. No special railroad rates have been granted.

The Chicago headquarters during the trip will be at the Fort Dearborn Hotel, corner of Van Buren and La Salle Sts. Special rates have been made as follows:—

Double room for two persons in one bed, \$2.00 per day, or \$1.00 for each person.

Single room for one person, \$1.50 per day.

The Milwaukee headquarters will be at the Hotel Wisconsin, 3rd Avenue near Grand.

Double room without bath \$2.00, or \$1.00 for each person.

Trains returning to Champaign leave 12th street station at 5:20 P. M. and 6:35 P. M.

## ARCHITECTURE

### Monday, November 27

- 8:00 A. M.—Assemble at FORT DEARBORN HOTEL, Van Buren and La Salle Streets, for general instructions.
- 8:30 A. M.—STANDARD SANITARY MANUFACTURING COMPANY, 900 South Michigan Avenue. Those who leave Champaign at 4:30 A. M. will meet the party here.
- 9:30 A. M.—ART INSTITUTE, Michigan Avenue and Adams Street.
- 1:15 P. M.—OFFICE BUILDINGS—People's Gas Building, Michigan Ave. and Monroe Street; Chamber of Commerce, Washington and La Salle Streets; Corn Exchange Building; Continental and Commercial National Bank Building; Insurance Exchange Building.
- 3:00 P. M.—Assemble at NORTHWESTERN STATION, Canal and Madison Streets, to inspect building.

### Tuesday, November 28

- 8:00 A. M.—BUILDER'S EXHIBIT, 2nd Floor Insurance Exchange Building, 175 West Jackson Boulevard.
- 9:30 A. M.—Leave for UNIVERSITY CLUB, Michigan Avenue and Monroe Street.

## ARCHITECTURE

11:00 A. M.—Offices of HOLABIRD & ROCHE, Architects,  
Michigan Avenue and Monroe Street.

1:00 P. M.—Assemble at North entrance of CITY BUILD-  
ING.

1:15 P. M.—RESIDENCES. Take North State St. car to  
Ohio St. and walk east to Lincoln Parkway and  
north along Lake Shore Drive, to Lincoln Park,  
west to Astor St., south to Division St., west to  
State St., then south stopping at the Fourth  
Presbyterian Church, 126 East Chestnut Street.

6:00 P. M.—ILLINOIS SOCIETY OF ARCHITECTS, Art  
Institute, Michigan Avenue and Adams Street.

### Wednesday, November 29

8:00 A. M.—Assemble at FORT DEARBORN HOTEL for  
general instructions.

8:15 A. M.—Take Douglas Park Branch of Metropolitan  
Elevated to 54th Avenue to the MIDLAND  
TERRA COTTA COMPANY, 16th Street and  
54th Avenue.

1:00 P. M.—Assemble at North Entrance of CITY BUILD-  
ING.

1:15 P. M.—Take North State Street car to Grand Avenue  
and transfer for MUNICIPAL PIER.

## ARCHITECTURAL ENGINEERING

### Monday, November 27

8:00 A. M.—Assemble at FORT DEARBORN HOTEL, Van Buren and La Salle Streets, for general instructions.

8:15 A. M.—Take Illinois Central Suburban Express train at Van Buren Street for 63rd Street, to inspect NEW BUILDING FOR ILLINOIS CENTRAL RAILROAD.

Those who leave Champaign at 4:30 A. M. will meet party here.

10:30 A. M.—Take Suburban Express back to Van Buren St.

11:00 A. M.—BUILDER'S EXHIBIT, 2nd Floor Insurance Exchange Building, 175 West Jackson Boulevard.

1:00 P. M.—Take Archer Avenue car going South on State Street and get off at Archer and Normal Avenues at the plant of HANSELL & ELCOCK.

### Tuesday, November 28

8:00 A. M.—Assemble at FORT DEARBORN HOTEL for general instructions.

8:15 A. M.—KIMBALL BUILDING ADDITION, Jackson Boulevard and Wabash Avenue.

## ARCHITECTURAL ENGINEERING

10:30 A. M.—MORRISON HOTEL ADDITION, Clark and Madison Streets.

1:00 P. M.—Assemble at North Entrance to CITY BUILDING.

1:15 P. M.—Take car North to Grand Avenue, transfer to car going East, for MUNICIPAL PIER.

2:30 P. M.—Take car at Municipal Pier for UNDERWRITERS' LABORATORIES.

3:00 P. M.—UNDERWRITERS' LABORATORIES, 207 East Ohio Street.

6:00 P. M.—ILLINOIS SOCIETY OF ARCHITECTS, Art Institute, Michigan Avenue and Adams Street.

**Wednesday, November 29**

8:00 A. M.—Assemble at FORT DEARBORN HOTEL for general instructions.

8:15 A. M.—Take Douglas Park Branch of Metropolitan Elevated to 54th Avenue to the plant of the MIDLAND TERRA COTTA COMPANY, 16th Street and 54th Avenue.

1:00 P. M.—Assemble at FORT DEARBORN HOTEL.

1:15 P. M.—FIELD MUSEUM OF NATURAL HISTORY, opposite Illinois Central 12th Street Station.

## Architecture and Architectural Engineering NOTES

The Illinois Society of Architects has extended an invitation to the seniors of the department to attend their monthly meeting held in the rooms of the Art Institute at 6:00 P. M., Tuesday. It is expected that all members of the party will attend this meeting as part of the regular inspection trip. Dinner will be served by the Society at the Art Institute.

Fort Dearborn Hotel, La Salle and Van Buren Streets, Holabird & Roche, Architects.

Standard Sanitary Manufacturing Company, 900 South Michigan Avenue. Display of modern plumbing fixtures and supplies, showing bathroom, kitchen and laundry fixtures in solid porcelain, vitreous ware and enameled iron.

Art Institute, Michigan Avenue and Adams Street. An opportunity to study the fine collection of paintings and sculpture, also to visit the drawing rooms and studios of the Institute.

Office Buildings. A survey of office buildings. People's Gas Building one of the most expensive, Chamber of Commerce one of the oldest but best paying office buildings, Corn Exchange has an interesting exterior, Continental and Commercial National has an interesting interior treatment, Insurance Exchange is one of the cheapest as far as first cost is concerned.

Northwestern Station, Canal and Madison Streets, Chas. S. Frost, Architect. Of unusual interest because of the many conveniences for the traveling public, such as bath rooms, hospitals, etc., in addition to its railroad terminal facilities.

Builder's Exhibit, 2nd Floor Insurance Exchange Building, Fifth Avenue and Jackson Boulevard, D. H. Burnham & Company, Architects of the building. A large and interesting display of builder's materials and equipment.

University Club, Michigan Avenue and Monroe Street. Holabird & Roche, Architects. The English perpendicular Gothic style of Architecture has been used throughout the building for exterior work. The main dining room is copied from Crosby Hall, formerly existing in London. Finish in principal story is all genuine English Oak.

Holabird & Roche, Architects, Monroe Building. General lay-out of a large office showing executive offices, drafting rooms, methods of filing drawings, complete sets of blue prints for large buildings.



## Architecture and Architectural Engineering

Municipal Pier, at the foot of Grand Avenue. One of the largest recreation piers in the world and the finest one in this country.

Walk through the exclusive residential district of Chicago, under the direction of a Chicago architect. The homes in this district were designed by many of the foremost architects in this country.

Fourth Presbyterian Church, Delaware Street and Lake Shore Drive. Cram, Goodhue and Ferguson of Boston, Architects. Howard Van Doren Shaw, Chicago, Associate Architect. A beautiful example of church architecture. Structurally, it is as real as the old cathedrals of England. It is not a steel framed structure with a stone veneer but is solid supporting masonry. Cost \$500,000.

Midland Terra Cotta Company, 16th Street and 54th Avenue. The manufacture of terra cotta and faience, from the receivings of the architect's drawings through the various processes of manufacture.

New building for Illinois Central Railroad, 63rd Street Station, a ten-story steel frame fire-proof structure; combined station and office building. Many interesting steel details and construction lay-out. See the temporary track elevation work to permit the removal of old trusses across track.

Hansell & Elcock, Archer and Normal Avenues. A modern structural steel plant. Inspect the fabrication of structural steel from the laying out through the assembling and milling of the finished product.

Kimball Building Addition, Graham, Burnham & Company, Architects. Jackson Boulevard and Wabash Avenue. A modern office building under construction.

Morrison Hotel Addition, Clark and Madison Streets, Marshall & Fox, Architects. Inspect foundation work, contractor's lay-out.

Underwriter's Laboratories, 207 East Ohio Street. Under the direction of the National Board of Fire Underwriters. Principal office and testing station. See office portion showing satisfactory office treatment by the use of fire-proof materials for floors, interior finish, walls and ceilings. Apparatus for testing all forms of construction to determine their value as a fire retardant. The "home" of the Underwriter's label.

New Field Museum of Natural History, opposite Illinois Central Station, Graham, Burnham & Company, Architects. A building 700 feet long, costing over \$6,000,000 and requiring three years to build.

## CERAMIC ENGINEERING

### Monday, November 27

- 7:30 A. M.—Assemble at Fort Dearborn Hotel, Van Buren and La Salle Streets, Chicago.
- 8:00 A. M.—Take Rock Island Railway at La Salle Street Station to Purington.
- 8:45 A. M.—Arrive Purington. Walk to plant of the ILLINOIS BRICK COMPANY, Yard No. 17.
- 10:40 A. M.—Return to Purington.
- 11:00 A. M.—Take Rock Island Railway to Chicago.
- 11:51 A. M.—Arrive La Salle Street Station. Lunch.
- 12:50 P. M.—Take Clybourne Avenue car to NORTHWESTERN TERRA COTTA COMPANY, 2545 Clybourne Avenue.
- 3:00 P. M.—Take Clybourne Avenue car to THE ALLIANCE COMPANY, 1924 Clybourne Avenue.
- 4:45 P. M.—Return to Fort Dearborn Hotel.
- 6:00 P. M.—Take Santa Fe train at Dearborn Station for Streator.
- 8:34 P. M.—Arrive Streator and go to the Plumb House.

### Tuesday, November 28

- 7:30 A. M.—Take car to THE BARR CLAY COMPANY.
- 10:00 A. M.—Walk to STREATOR CLAY MFG. CO.
- 12:00 M. —Return to city for lunch.
- 1:15 P. M.—Take car to 9th Street. Walk to STREATOR BRICK COMPANY.
- 3:00 P. M.—Walk to NATIONAL DRAIN TILE CO. plant.
- 4:30 P. M.—Walk to WESTERN GLASS COMPANY.
- 6:30 P. M.—Supper.

## **CERAMIC ENGINEERING**

**7:45 P. M.**—Take car to west plant of **AMERICAN BOTTLE COMPANY.**

**10:00 P. M.**—Return to hotel.

### **Wednesday, November 29**

**7:50 A. M.**—Take Interurban car to Ottawa.

**8:45 A. M.**—Arrive Ottawa. Go to **PELTIER GLASS CO.**

**10:30 A. M.**—Go to **FEDERAL PLATE GLASS CO.**

**12:40 P. M.**—Return to city for lunch.

**1:00 P. M.**—Visit the **PIONEER PLANT OF THE NATIONAL FIRE PROOFING COMPANY.**

**2:30 P. M.**—Take car to **CHICAGO RETORT AND FIRE BRICK COMPANY.**

**5:00 P. M.**—Return to Ottawa and disband.

### **Trains leave Ottawa as follows:**

For Champaign—

Via Interurban, at 4:50 or 5:50; arriving in La Salle at 5:42 or 6:42.

Leave La Salle via Illinois Central, at 6:54; arrive at Bloomington 9:04.

Leave Bloomington via Big Four, 9:22; arrive at Champaign 11:00.

For Chicago—

Leave Ottawa via Rock Island Railroad at 7:19; arrive Chicago 9:40; or

Leave Ottawa via Interurban at 4:50; arrive Joliet 6:40; Leave Joliet via Chicago & Alton 7:40; arrive Chicago 8:50.

## **CIVIL ENGINEERING**

### **Monday, November 27**

- 8:00 A. M.—Assemble at the Fort Dearborn Hotel, Van Buren and La Salle Streets, for general instructions.
- 8:27 A. M.—Leave La Salle Street Station in special coach on Lake Shore Railway for Gary, Indiana. Go to plant of INDIANA STEEL COMPANY.
- 11:45 P. M.—Luncheon at Y. M. C. A. CAFETERIA, Gary.
- 12:45 P. M.—Take motor bus to plant of AMERICAN BRIDGE COMPANY, Curtis.
- 5:24 P. M.—Take train at a flag stop in plant yard for Chicago on Lake Shore Railway.
- 8:00 P. M.—Members of party are invited to attend a social gathering of the CHICAGO ENGINEERS' CLUB at their rooms, 314 South Federal Street.

### **Tuesday, November 28**

- 8:00 A. M.—Assemble at the Fort Dearborn Hotel for general instructions.
- 8:10 A. M.—Take Wilson Avenue, or Evanston car on Northwest Elevator R. R. getting off at Wilson Avenue. The party will here divide, the first twenty men on the list inspecting the WILSON AVENUE TUNNEL and the remainder inspecting the new LAKE VIEW PUMPING STATION.
- 10:00 A. M.—Two groups will interchange places.

## CIVIL ENGINEERING

11:30 A. M.—Take elevated train going south, getting off at Chicago Avenue. Walk east to inspect the OLDEST PUMPING STATION IN CHICAGO.

12:30 P. M.—Get luncheon at any convenient place.

1:30 P. M.—Leave La Salle Street Station on the Rock Island Railway for Auburn Park, 78th Street, to inspect TRACK ELEVATION.

5:42 P. M.—Leave Auburn Park for Chicago.

### Wednesday, November 29

8:00 A. M.—Assemble at Fort Dearborn Hotel for general instructions.

8:05 A. M.—Highway Engineers will inspect the following: Plant of BARTLETT COMPANY, 2900 Sacramento Avenue. Plant of R. F. CONWAY CO., 49th Street and Hoyne Avenue. Remainder of the party will inspect some or all of the following: FIELD MUSEUM OF NATURAL HISTORY near 12th Street station of Illinois Central R. R. BUILDING at 15th Street and South State Street. BEATRICE CREAMERY BUILDING, 14th and South State Street. MORRISON HOTEL, Clark and Madison Sts. SIXTY-THIRD STREET ILLINOIS CENTRAL STATION.

1:00 P. M.—Take the City Launch at south end of State Street Bridge for a trip down the South Branch to inspect MOVABLE BRIDGES.

# **ELECTRICAL ENGINEERING**

## **Sunday, November 26**

10:45 P. M.—Special electric sleeper on Illinois Traction System leaves Burrill Avenue, Urbana. Arrange in advance for special transportation and berth tickets.

11:00 P. M.—Special leaves Champaign Interurban Station.

## **Monday, November 27**

7:00 A. M.—Arrive Granite City. Leave grips with special tags in charge of car porter.

7:15 A. M.—Breakfast by courtesy of Commonwealth Steel Company, at the works.

8:00 A. M.—COMMONWEALTH STEEL CO. plant Open-hearth process.

10:00 A. M.—NATIONAL ENAMELING & STAMPING WORKS. Rolling sheet metal and enameling process.

12:00 M. —Lunch.

12:40 P. M.—Take electric car for St. Louis, transferring at Salisbury Street.

1:30 P. M.—Arrive at works of ST. LOUIS CAR CO., 8000 North Broadway. Manufacture of steam and electric railway cars.

4:00 P. M.—Take Broadway cars for Ashley Street.

4:40 P. M.—Power House of the UNION ELECTRIC LIGHT & POWER CO. Large reciprocating and turbine units, one horizontal turbine of 30,000 kilowatts now under construction.

6:15 P. M.—Arrive MAJESTIC HOTEL, 11th and Pine Streets, St. Louis Headquarters.

## **Tuesday, November 28**

7:15 A. M.—Take Hodiament cars.

8:00 A. M.—Arrive at factory of Columbia Lamp Division, NATIONAL LAMP WORKS OF GENERAL ELECTRIC CO. "Mazda" tungsten lamps.

10:00 A. M.—Walk to A. LESCHEN & SONS ROPE CO. New factory making wire cables.

## ELECTRICAL ENGINEERING

- 12:00 M. —Walk to Substation of ELECTRIC CO. OF MISSOURI, receiving power from Keokuk, Ia. by the 100,000 volt transmission line. Large transformers, connected delta, and converters, delivering power at 13,000 volts A. C. and 600 volts D. C. Note cooling system for transformers.
- 1:15 P. M.—Walk to WAGNER ELECTRIC MFG. CO. factory, 6400 Plymouth Avenue.
- 1:30 P. M.—Lunch by invitation of the WAGNER CO.
- 2:15 P. M.—Visit works. Transformers, generators, motors, switchboard instruments.
- 5:15 P. M.—Take cars for city.
- 7:40 P. M.—Special tourist sleeper leaves Union Station by Burlington Route for Keokuk, Iowa. Buy regular tickets; fare, \$4.34, berth \$1.00.

### Wednesday, November 29

- 7:00 A. M.—Leave sleeper for HOTEL IOWA for breakfast.
- 8:00 A. M.—Leave Hotel for the Hydraulic Power House of the MISSISSIPPI RIVER POWER CO. Government navigation lock and dry dock. Monolithic concrete dam crossing river with spillway arrangements.
- Solid concrete turbine building, with reinforced concrete superstructure for the electrical equipment. 13,000 volt generators of 7,500 kw capacity, stepping up to 110,000 volts by Y-connected transformers for transmission to St. Louis and other cities. The St. Louis line crosses the river from Keokuk and passes through Illinois 140 miles. Note relocation of Burlington tracks. The former right-of-way is submerged.
- 12:00 M. —Return to hotel for dinner.
- 1:30 P. M.—Walk, take street cars, or train (at 2 P. M.) for Hamilton, Ill. across the river.
- 2:10 P. M.—Leave Hamilton via Toledo, Peoria and Western R. R. for Peoria. To get 2-cent rate, buy tickets at Hamilton; fare, \$2.25.
- 6:19 P. M.—Arrive Peoria.
- 7:25 P. M.—Leave via Big Four for Champaign and Urbana, arriving at 11 P. M.; fare, \$1.82.

## MECHANICAL ENGINEERING

### Monday, November 27

- 8:00 A. M.—Assemble at Fort Dearborn Hotel, Van Buren and La Salle Streets, for general instructions.
- 8:15 A. M.—Leave the Fort Dearborn Hotel and proceed to the NEW MORRISON at Madison and Clark Streets for an inspection of the power plant.
- 12:00 M. —Leave Northwestern Station for Kenosha, Wis.
- 1:08 P. M.—Arrive in Kenosha. Inspect the plant of the NASH MOTORS CO., builders of the Jeffrey automobiles and Quad trucks.
- 6:09 P. M.—Leave Kenosha for Milwaukee arriving there at 7:00 P. M. With baggage in hand proceed to the Wisconsin Hotel on 3rd Avenue near Grand.
- 8:15 P. M.—Leave the hotel for the COMMERCE STREET STATION of the MILWAUKEE ELECTRIC RAILWAY AND LIGHT COMPANY.

### Tuesday, November 28

- 8:00 A. M.—Leave the Wisconsin Hotel. Take a West Allis car at 3rd & Grand Avenue for a visit at the works of the ALLIS-CHALMERS COMPANY at West Allis.



## MECHANICAL ENGINEERING

**1:00 P. M.**—Lunch at the Allis-Chalmers Club on invitation of the Allis-Chalmers Company.

**2:15 P. M.**—Leave the Allis-Chalmers Company for **THE FALK COMPANY**.

**4:30 P. M.**—Leave The Falk Company for downtown.

**8:00 P. M.**—Leave for Chicago on a Goodrich Transit Co. boat arriving there at 6 A. M. In case of a storm the party will take a Chicago & Northwestern train at 7:10 P. M. for Chicago.

### **Wednesday, November 29**

**8:15 A. M.**—Assemble at the Van Buren Street Suburban Station and take a South Chicago Express. Inspect the **SOUTH WORKS** of the **ILLINOIS STEEL COMPANY**.

**12:00 M.** —Leave the plant of Illinois Steel Company, and take I. C. suburban train for down town.

**1:45 P. M.**—Take a south side elevated train at Dearborn Station and proceed to the plant of the **FORD MOTOR COMPANY** at 39th Street and Wabash Avenue.

**4:00 P. M.**—The party will disband.

## **MINING ENGINEERING**

### **Wednesday, November 22**

- 12:13 P. M.—Leave Champaign via I. C. R. R.  
3:57 P. M.—Arrive DuQuoin, Illinois.  
4:00 P. M.—SURFACE PLANT, PARADISE COAL CO.  
by automobile.  
7:30 P. M.—Leave DuQuoin via I. C. R. R.  
8:20 P. M.—Arrive Benton, Illinois. Go to STATE MINE  
RESCUE STATION where quarters have been  
provided for three nights.

### **Thursday, November 23**

- 7:56 A. M.—Leave Benton via C. & E. I. R. R.  
8:10 A. M.—Arrive at West Frankfort (Orient Switch)  
8:30 A. M.—Arrive at ORIENT MINE, and inspect under-  
ground workings and surface plant.  
1:00 P. M.—Leave ORIENT MINE for West Frankfort.  
2:00—4:00 P. M.—SURFACE PLANT MINE NO. 9, OLD  
BEN MINING CORPORATION.  
6:26 P. M.—Leave West Frankfort via C. & E. I. R. R.  
7:01 P. M.—Arrive Benton. Go to MINE RESCUE STA-  
TION.  
8:00 P. M.—Inspection of STATE MINE RESCUE STA-  
TION.

### **Friday, November 24**

- 6:28 A. M.—Leave Benton via I. C. R. R.  
6:39 A. M.—Arrive Buckner, and inspect mine and surface  
plant of UNITED COAL MINING CO.  
11:17 A. M.—Leave Buckner.  
11:35 A. M.—Arrive Benton.  
1:00 P. M.—Inspect mine and surface plant of MIDDLE  
FORKS MINING CO.  
4:00 P. M.—Return to Benton.

## **MINING ENGINEERING**

### **Saturday, November 25**

- 6:28 A. M.—Leave Benton via I. C. R. R.  
8:26 A. M.—Arrive at Coulterville, Illinois.  
9:28 A. M.—Leave Coulterville via Illinois Southern R. R.  
1:07 P. M.—Arrive at Flat River, Mo. Go to Hammond Hotel where reservations have been made for the party while in Flat River.  
2:00 P. M.—Inspect a LEAD CONCENTRATOR and if possible a LEAD MINE near Flat River.

### **Sunday, November 26**

Spend day at Flat River.

### **Monday, November 27**

- 7:00 A. M.—Party meet for inspection of LEAD MINES and CONCENTRATORS near Flat River. Trip to last all day.

### **Tuesday, November 28**

- 7:00 A. M.—Inspect POWER PLANT CONSTRUCTION WORK at Doe River.  
1:00 P. M.—Inspect LEAD CONCENTRATOR under construction at Federal, near Flat River.

### **Wednesday, November 29**

- 6:36 A. M.—Leave Flat River via Mississippi River and Bonne Terre R. R.  
9:28 A. M.—Arrive at Broadway (near St. Louis). Visit byproduct coking plant of LACLEDE GAS LIGHT CO.  
11:00 A. M.—Take street car for St. Louis.  
12:30 P. M.—Leave St. Louis (Eads Bridge) via interurban for Collinsville, Ill. (Leave car at Cuba Lane).  
1:30 P. M.—Visit lead smelting plant of ST. LOUIS SMELTING & REFINING CO.  
3:30 P. M.—Take interurban for Champaign via Edwardsville, Springfield and Decatur.  
10:55 P. M.—Arrive Champaign.

## NOTES

PARADISE COAL CO., DUQUOIN, ILL. The mine of 2,200 tons daily capacity is about three miles from DuQuoin. The shaft is 365 feet deep to the No. 6 coal, which is here 8 feet thick. The surface plant includes a Marcus differential motion screen.

STATE MINE RESCUE STATION, BENTON, ILL. The party will have sleeping quarters here during the three days spent in the vicinity. Meals may be obtained at restaurants in the neighborhood. This station is one of three maintained by the State of Illinois, and has a crew of seven men thoroughly trained for mine rescue and fire fighting work.

ORIENT MINE OF THE CHICAGO, WILMINGTON AND FRANKLIN COAL CO. This is one of the largest and most thoroughly equipped mining plants in Illinois. The daily capacity is over 4,000 tons. The depth of the shaft is 550 feet to No. 6 coal which is here 10 feet in thickness.

OLD BEN MINING CORPORATION. At West Frankfort are two large mines of this company, mines No. 8 and 9. The surface equipment includes unique rescreening plants using spiral separators for cleaning the coal. These mines are each of a daily capacity of more than 4,000 tons. The shafts are respectfully 460 and 368 feet deep to seam No. 6, which is here 9 to 10 feet thick.

BUCKNER MINE OF UNITED COAL MINING CO. This is a modern mine in thick coal (9-11 ft.), and there is a complete rescreening plant on the surface in which the coal is prepared for market. Depth of shaft 472 feet, daily tonnage 3700.

MIDDLE FORKS MINING CO., NEAR BENTON. This company is operating a new mine in seam No. 6 at a depth of about 600 feet. The surface plant has no steam

engines or boilers and the electric power used is purchased from a power company.

During the ride on the Illinois Southern Railway from Coulterville, Illinois to Flat River, Missouri, the train crosses the Mississippi River on a ferry and enters the hilly country of southeastern Missouri. The change in topography from the Illinois side of the river, as well as the many rock outcrops along the railroad, are of special geological interest.

FLAT RIVER, MISSOURI is in the center of the largest lead mining and concentrating district in the world. Within easy reach by electric cars are the mining towns of Doe Run, Federal, River Mines, St. Francois and Bonne Terre. The principal companies operating are The Federal Lead Company, The St. Joseph Lead Company, The St. Louis Smelting and Refining Company and the Desloge Consolidated Lead Company. Probably 15,000 tons of lead ore per day are mined and treated in the concentrating plants in this district. As time permits, mines and mills will be inspected which best illustrate different methods.

LACLEDE GAS LIGHT CO., ST. LOUIS, MO. This company has a 56-oven Koppers byproduct coking plant near St. Louis. Every stage of byproduct coking, including recovery of tar, ammonia and benzol is in operation.

LEAD SMELTER OF ST. LOUIS SMELTING & REFINING CO., COLLINSVILLE, ILL. Lead ore mined and concentrated in southeastern Missouri, is brought here to be smelted into pig and refined lead. The plant is unusually complete and includes four hearths, sintering machines, lead blast furnaces, and drossing and desilverizing kettles.

If connections permit, the party may return to Champaign by train rather than by the electric traction system.

The estimated necessary expenses for the entire trip are \$28.00.

## MUNICIPAL AND SANITARY ENGINEERING

**Monday, November 27**

- 7:30 A. M.**—Assemble at the Fort Dearborn Hotel Van Buren and La Sale Streets for general instructions.
- 8:15 A. M.**—Arrive CHICAGO MUNICIPAL SHOPS, 31st Street and Sacramento Avenue.
- 9:30 A. M.**—Leave Chicago Municipal Shops for Evanston.
- 11:00 A. M.**—Arrive EVANSTON FILTRATION PLANT.
- 1:00 P. M.**—Leave Evanston on Chicago & Milwaukee Electric Railway for Great Lakes Naval Training Station.
- 2:00 P. M.**—Arrive at GREAT LAKES NAVAL TRAINING STATION.
- 4:30 P. M.**—Leave Great Lakes Naval Training Station on Chicago & Milwaukee Electric for Waukegan.
- 5:00 P. M.**—Arrive WAUKEGAN WATERWORKS.
- 8:59 P. M.**—Leave Waukegan on Northwestern R. R. for Milwaukee.
- 10:15 P. M.**—Arrive Milwaukee and proceed to Wisconsin Hotel, Third Avenue near Grand.

## MUNICIPAL AND SANITARY ENGINEERING

### Tuesday, November 28

8:00 A. M.—Report at office of City Engineer to inspect waterworks pumping station, intake tunnel under construction and garbage incinerator plant.

1:30 P. M.—Report at office of Chief Engineer, Milwaukee Sewerage Commission to inspect the Jones Island Experimental Sewage Testing Station and sewer work under construction.

8:00 P. M.—Take Goodrich Line boat for Chicago.

### Wednesday, November 29

8:00 A. M.—Arrive CHICAGO AVENUE PUMPING STATION.

9:30 A. M.—Arrive LAKE VIEW PUMPING STATION.

10:15 A. M.—Leave Lake View Pumping Station and inspect WILSON AVENUE TUNNEL nearby.

12:00 M. —Lunch.

1:30 P. M.—Arrive at CHICAGO REDUCTION PLANT.

2:30 P. M.—Arrive SEWAGE TESTING STATION of the Sanitary District of Chicago and Chicago Union Stock Yards.

3:30 P. M.—FILTRATION PLANT, etc. of Chicago Union Stock Yards.

5:00 P. M.—Take 39th Street Cross-town car to 39th ST. SEWAGE PUMPING STATION.

# RAILWAY ENGINEERING

**Monday, November 27**

(Same program on this day for all railway engineers.)

- 8:00 A. M.—Assemble at the FORT DEARBORN HOTEL, Van Buren and La Salle Streets, for general instructions.
- 8:27 A. M.—Leave La Salle Street Station in special coach on Lake Shore & Michigan Southern Railway for Gary, accompanying the Civil Engineers. (See Civil Engineers' Itinerary.)
- 11:45 A. M.—Luncheon at Y. M. C. A. Cafeteria, Gary.
- 1:00 P. M.—Take South Shore Electric Line for Pullman, to inspect PULLMAN CAR SHOPS.
- 4:48 P. M.—Take Illinois Central Railway Suburban train to Van Buren Street Station, Chicago. Railway Civil Engineers return to Fort Dearborn Hotel.
- 8:00 P. M.—Railway Mechanical and Railway Electrical Engineers leave from the foot of Michigan Avenue by boat (Goodrich Transit Co.) for Milwaukee.

## Railway Civil Engineers

**Tuesday, November 28**

- 8:00 A. M.—Take Rock Island Railway train at La Salle St. Station for Englewood. At Englewood (63rd Street) take Cicero car to end of line. Transfer to Clearing car and proceed to Clearing. Inspect CLEARING GRAVITY YARD. Return over same route, arriving at 63rd Street Station of Rock Island at 12:30 for lunch.



## RAILWAY ENGINEERING

**1:45 P. M.**—Leave 63rd Street Station on the Rock Island Railway for Auburn Park, 78th Street, accompanying the Civil Engineers on inspection of TRACK ELEVATION work.

**5:43 P. M.**—Leave Auburn Park for Chicago, returning to Fort Dearborn Hotel.

### Railway Mechanical and Electrical Engineers

**Tuesday, November 28**

**6:00 A. M.**—Arrive in Milwaukee, Goodrich Transit Co's docks and proceed to Hotel Wisconsin for breakfast.

**8:00 A. M.**—Leave the Hotel Wisconsin. Take West Allis car at 3rd Street and Grand Avenue for a visit at the works of the Allis-Chalmers Company, at West Allis.

**12:00 M.** —Lunch at West Allis.

**1:00 P. M.**—Take "National Ave" car going east on Greenfield Avenue to 22nd Avenue. Transfer to car marked 27th Street going north. Get off at Faulk Mfg. Co's plant and walk to MILWAUKEE SHOPS of the CHICAGO, MILWAUKEE & ST. PAUL RAILWAY.

**3:00 P. M.**—After inspection of Chicago, Milwaukee & St. Paul Railway Shops walk to 27th Street, 22nd Avenue Viaduct. Take car marked 27th Street going north. Transfer east on Wells Street car at 27th and Wells Street. Get off at East Water and Wisconsin Streets. Take Oakland Avenue car going north to NATIONAL BRAKE AND ELECTRIC COMPANY'S plant which inspect.

## **RAILWAY ENGINEERING**

**6:00 P. M.**—Return to East Water and Wisconsin Streets via Oakland Avenue car. Dinner at Hotel Wisconsin.

**8:00 P. M.**—Goodrich Transit Co. boat leaves for Chicago, foot of Seymour Street and Milwaukee River.

### **Railway Civil Engineers**

**Wednesday, November 29**

**8:00 A. M.**—Take Oak Park Elevated Line at La Salle Street Station for Crawford Avenue. Inspect **CHICAGO & NORTHWESTERN RY. SHOPS** at West 40th Street.

**10:30 A. M.**—Return via elevated railway to the Loop. Change to Northwestern Elevated Line for Byrn Maur Avenue, Edgewater, to inspect **TRACK ELEVATION WORK** of C. M. & St. P. RY.

**2:45 P. M.**—Return to the Loop. Join railway mechanical Engineers in inspection of B. & O. RY. **LINCOLN STREET TERMINAL**. (See Railway Mechanical Engineers' schedule.)

### **Railway Electrical Engineers**

**Wednesday, November 29**

**7:30 A. M.**—Take Wentworth Avenue car south at Clark and Van Buren Streets. Transfer west at 22nd Street to plant of **COMMONWEALTH EDISON CO.**

## RAILWAY ENGINEERING

- 10:00 A. M.**—Return to the Loop. Take Humbolt Park Elevated for SHOPS OF METROPOLITAN WEST SIDE ELEVATED RAILWAY, getting off at Racine Avenue.
- 11:45 A. M.**—Return to the Loop via elevated Railway.
- 1:00 P. M.**—Leave terminal of Aurora, Elgin & Chicago Ry., 5th Avenue and Jackson Boulevard, for Lombard, arriving at 1:48. Inspect SUB-STATION.
- 2:35 P. M.**—Take electric line train to Wheaton, arriving at 2:48. Inspect WHEATON SHOPS.
- 5:03 P. M.**—Leave for Chicago.

### Railway Mechanical Engineers

Wednesday, November 29

- 8:00 A. M.**—Take Oak Park Elevated line at La Salle Street Station for Crawford Avenue. Inspect CHICAGO & NORTHWESTERN RY. SHOPS at West 40th Street.
- 11:00 A. M.**—Take Oak Park Elevated Line to Sacramento Avenue. Walk two blocks to plant of GRIF-FIN WHEEL CO.
- 1:00 P. M.**—Take elevated railway to Lake Street Transfer. Change to Humbolt Park car for Racine Ave. Walk to SHOPS OF METROPOLITAN WEST SIDE ELEVATED RAILWAY.
- 2:45 P. M.**—Take elevated railway to the Loop. Get off at Adams Street station. Take 12th Street car west at Adams and Dearborn Streets. Get off at Robey Street to inspect B. & O. RAILWAY LINCOLN STREET TERMINAL.

## DEPARTMENT OF ARCHITECTURE

### Faculty

Profesor L. H. Provine	Professor C. R. Clark
Profesor Percy Ash	Mr. R. T. Jones

### Seniors in Architecture

H. L. Barnes	R. E. Lawrence
W. A. Behel	Geo. Lindeberg
L. R. Bradley	M. M. Lovell
S. H. Coile	G. W. Lutes
L. N. Crawford	Marion Manley
C. R. Federmann	H. G. Overend
G. A. Ferguson	C. B. Rowe
J. H. Flemming	E. Schaumberg, Jr.
F. L. Goldman	K. M. Waggoner
A. S. Graven	C. A. Williams
D. E. Jones	
G. P. Lagergren	

### Seniors in Architectural Engineering

Dan Babcock	C. C. Lundeen
Tom Brown	G. W. Mahn
G. C. Darrell	C. O. Mueller
R. E. Dippell	H. E. Mueller
W. B. Ewer	E. R. Mullins
E. M. Finn	W. T. Purcell
C. J. Gruhl	R. S. Raaberg
C. A. Gustafson	J. G. Ritter
L. B. Hardiman	P. T. Rockey
S. Hornkohl	H. F. Schoene
N. A. Kundsén	J. C. Sherrick
Edw. Lerch	Edw. Smidl
M. C. Levinson	G. W. Stoddard
J. T. Lewis	T. S. Tanner
A. D. Little	J. H. Tichnor
H. H. Lueder	T. W. Tolmie
R. M. Lueder	W. A. Zeigenhagen

## DEPARTMENT OF CERAMIC ENGINEERING

### Faculty

Professor E. W. Washburn

Professor R. K. Hursh Professor C. W. Parmelee

### Students

C. E. Bates

F. L. Steinhoff

M. Bernstein

C. A. Stone

R. M. Chittenden

G. M. Tucker

A. B. Christopher

J. W. Wright

J. L. Crawford

T. S. Browning

G. E. Sladek

L. L. Byers

## DEPARTMENT OF CIVIL ENGINEERING

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Professor Ira O. Baker Professor W. M. Wilson

Mr. C. C. Wiley Mr. C. S. Sale

### Graduate Student

Y. Liu

### Seniors

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L. H. Lehman

D. M. Campbell

J. V. Lund

G. O. Consoer

C. Makutchan

E. Cook

G. W. McIlwain

L. L. Davis

E. T. Mulford

H. L. Derby

D. R. Norris

H. H. Edwards

V. A. Pecchia

C. M. Ettinger

R. L. Peck

S. W. Excell

B. E. Pierce

J. L. Fox

Harry Quick

A. G. Gehrig

E. F. Rehnquist

N. Gerten

T. E. Stockdale

A. E. Giertz

A. C. Schneider

M. A. Gould

F. W. Shaw

S. R. Heindel

J. P. Tuthill

W. A. Himmelreicher A. Van Praag, Jr.

G. W. Kidd

M. H. Vernon

E. I. Leander

H. H. Wiley

A. C. Lee

A. C. Wilson

## DEPARTMENT OF ELECTRICAL ENGINEERING

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Professor Morgan Brooks

### Graduate Students

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R. S. Quick

### Seniors

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S. J. Lurie

F. A. Brooks

L. C. MacMilan

F. E. Butterfield

M. Murata

S. M. Christophersen

K. Nakada

L. Church

S. Nakanishi

V. H. Dupre

M. Nakayama

V. J. Dushek

H. A. Pearson

D. G. Evans

C. L. Pfeiffer

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P. A. Raibourn

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D. A. Hills

J. L. Rowe

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G. B. Hoppins

H. O. Siegmund

Z. Hsieh

C. S. Singh

H. L. Husson

O. G. Tinkey

R. E. Johnson

W. G. Tuell

P. C. Jones

J. E. Walsh

J. M. Ketch

W. Y. Wu

O. Kriegl

T. S. Yang

A. N. Lendman

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## DEPARTMENT OF MECHANICAL ENGINEERING

### Faculty

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Profesor B. W. Benedict  
Professor A. C. Willard  
Professor O. A. Leutwiler

### Graduate Student

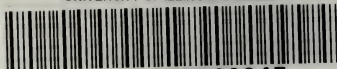
R. S. Quick  
R. L. Templin

L. J. Larson

### Seniors

G. T. Avery  
P. Becker  
O. E. Beers  
S. J. Bess  
D. W. Castle  
P. S. Conklin  
D. S. Cornell  
E. P. Daly  
H. Darby  
V. S. Day  
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F. E. Evans  
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J. L. Lummis  
A. N. Lungren  
R. K. Mangan  
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W. O. Nelson  
J. E. Ott  
R. M. Overton  
R. H. Pedler  
R. A. Pheiffer  
C. H. Proetz  
J. H. Ramser  
J. Rowe  
L. F. Simpson  
J. W. Smith  
G. K. Squier  
E. Swenson  
F. M. Van Deventer  
A. C. Woods, Jr.



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Professor E. A. Holbrook

### Graduate Student

H. E. Willson

### Seniors

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Thos. Fraser	M. B. Stewart
N. M. Morris	E. A. Teixeira
H. H. Porter	L. H. Whitney

## DEPARTMENT OF MUNICIPAL AND SANITARY ENGINEERING

### Faculty

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### Seniors

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E. B. Erickson	P. W. Ott
H. E. Fisher	A. Smart
A. L. Golinkin	S. J. Thomas
G. F. Gorey	S. Walker

## DEPARTMENT OF RAILWAY ENGINEERING

### Faculty

Mr. A. F. Comstock

### Seniors

E. C. Barnes	L. C. Heckler
R. S. Bigelow	A. J. Huber
T. L. Chang	K. M. Maitra
C. M. Clark	D. B. Ohrum
J. C. de Sousa	D. J. Strauch
R. T. Elliott	A. M. Tower
F. A. Gunther	J. H. Westbay